the group of binary oxides consisting of: $A_xB_yO_z$ (A, B=Li, Mg, Ca, Sr, Cr, Fe, Co, Ni, Mn, Cu, Y, La, Ce, Zr, or Ti).--

REMARKS

Claim 4 finds support in the specification at page 13, lines 17-18. reconsideration and withdrawal of the objection to the specification are respectfully requested.

Claims 1-5 were rejected under §112, second paragraph, and have been amended as to form. Support for the definition of a "ceramic ceria salt composite" is found at page 5, lines 19-23 and 28. Further, the Official Action correctly identifies the corresponding material in KUNZ et al. 3,775,185 (page 3, end of third paragraph) and thus it is believed that one of skill in the art will understand what this phrase means. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1-3 and 5 were rejected as anticipated by KUNZ et al. Claim 1 has been amended to provide the further limitation that the electrolyte has an operating temperature range of 300°-800°C and reconsideration and withdrawal of the rejection are respectfully requested.

KUNZ et al. describe a fuel cell where the electrolyte essentially consists of thallium oxide and eutectics thereof. The electrolyte may contain up to about 15% of an inert solid (claim 3) that may be thorium oxide or cerium oxide. Thus, the essential electrolyte material is thallium oxide which has been given a lower melting point by mixing it with a eutectic. The reason for this is to lower the working temperature of the fuel cell to the range of 120-300°C (see claim 4 and column 1, lines 60-63, column 2, lines 31-41). In this case the electrolyte is molten at the working temperature. Additionally, the electrolyte may contain an inert material such as cerium oxide.

In contrast, the invention defined in amended claim 1 is a fuel cell which works in the intermediate temperature range of 300-800°C (see page 5, lines 19-23, page 8, lines 12-13, page 10, line 26). The essential element in the electrolyte is a ceria ceramic mixed with a salt. As will be appreciated by those of skill in the art, the ceria ceramic remains solid during operation. The salt may be in solid or molten form (page 6, lines 21-22). Nowhere is thallium oxide mentioned.

Claim 4 was rejected as unpatentable over KUNZ et al. in view of SOKOLOV, *Ann.* Secteur anal. Phys-chim. Inst. Chim gen. (U.S.S.R.)(1938), 11, 237-51. Claim 4 is allowable for the reasons given above. Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Attached hereto is a marked-up version of the changes made to the claims. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Respectfully submitted,

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January 23, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claim 1 has been amended as follows:

--1. (amended) A fuel cell for production of electrical energy, comprising

a fuel chamber (1)

an anode (2a),

a cathode (2b),

an electrolyte (3) disposed between said anode and said cathode,

an oxidant chamber (4), wherein said chambers (1) and (4) enclose said anode, cathode and electrolyte,

[characterized in that:] wherein said electrolyte (3) is a ceramic CSC (ceria salt composite) electrolyte with an operating temperature range of 300°-800°C and comprising at least one salt and at least one ceria phase.-

Claim 2 has been amended as follows:

--2. (amended) A fuel cell according to claim 1, wherein the electrolyte comprises salts selected from salts that [can make] makes the CSC material function as a specific conductor for particular ions [such as $H+, O^{2-}$, or of other ionic charge, e.g., cationic Li^+, Na^+, K^+, or anionic, CO_3^{2-}, Cl^- and F^- etc., or a mixture thereof, preferably natural salts, e.g. NaCl].--

Claim 3 has been amended as follows:

--3. (twice amended) A fuel cell according to claim 1, wherein the electrodes [comprises] comprise binary oxides[, such as] selected from the group of binary oxides consisting of:

$A_xB_yO_z$ (A, B=Li, Mg, Ca, Sr, Cr, Fe, Co, Ni, Mn, Cu, Y, La, Ce, Zr, or Ti[, etc., typically, Li_xMO_y (M=Ni, Co, Mn), $Ce_{1-x}B_xO_{2-y}$, MnO_2 and $La_{1-x}Sr_xMn(Co)O_3$].--

Claim 5 has been amended as follows:

--5. (amended) A fuel cell according to claim 2, wherein the electrodes [comprises] comprise binary oxides[, such as] selected from the group of binary oxides consisting of: $A_xB_yO_z$ (A, B=Li, Mg, Ca, Sr, Cr, Fe, Co, Ni, Mn, Cu, Y, La, Ce, Zr, or Ti[, etc.), typically, Li_xMo_y (M=Ni, Co, Mn), $Ce_{1-x}B_xO_{2-y}$, MnO_2 and $La_{1-x}Sr_xMn(Co)O_3$].--